

**Notice of Allowability**

Application No.

10/668,909

Applicant(s)

MITTET, RUNE

Examiner

Victor J. Taylor

Art Unit

2863

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/16/2005.
2. ☒ The allowed claim(s) is/are 1 and 3-16.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings were received on 23 September 2003. These drawings are approved.

### ***Response to Arguments***

2. Applicant's arguments and the amendments to the independent claims on 8/22/2005 with the supplemental amendments to the claims filed 11/16/2005 with respect to the variable operator lengths and the extrapolation operator in the cited art with fixed operator lengths have been fully considered and are persuasive. The 102 (b) rejection of 18 May 2005 is moot and has been withdrawn.

### ***Allowable Subject Matter***

3. Claims 1 and 3-16 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter:

Regards to claim 1, the method for processing seismic with the dynamic nature of the variable operator minimized for each depth extrapolation step in the seismic data migration process with specific steps for "performing the depth migration using the explicit depth extrapolation operator in a sub-domain at a depth having the smallest operator length from the operator tables for the highest wavenumber in the sub-domain at the depth" as claimed is not found in the cited art of record.

Therefore, Independent claim 1, with the method for the seismic data processing of depth processing and constructing explicit depth extrapolation operators with the

Art Unit: 2863

explicit claimed steps for “constructing explicit depth extrapolation operators with variable operator lengths depending on maximum dip angle, accuracy condition, and wavenumber”...[and combined] with the particularly claimed steps for “constructing operator tables using the explicit depth extrapolation operators having the smallest operator length satisfying the accuracy condition at the maximum dip angle for each of a plurality of wave numbers”...[and/or] in combination with the explicit steps for “performing the depth migration using the explicit depth extrapolation operator in a sub-domain at a depth having the smallest operator length from the operator tables for the highest wavenumber in the sub-domain at the depth” in order to compute and process the seismic migration data sets is not found in the cited art of record.

Claims 3-16 are variously dependent on the allowed independent claim 1 and are allowed at least for the reasons cited above.

It is these limitations expressed in each of these claims and not found, taught, or suggested in the prior art of record, that makes these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

### ***Conclusion***

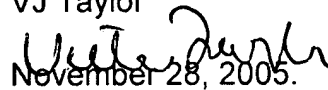
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor J. Taylor whose telephone number is 571-272-2281. The examiner can normally be reached on 8:00 to 5:30 PM.

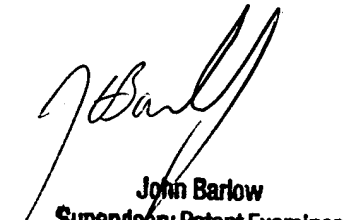
Art Unit: 2863

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on 571-272-2863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VJ Taylor

  
November 28, 2005.

  
John Barlow  
Supervisory Patent Examiner  
Technology Center 2800